

### AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

Claims 1-3 (Canceled).

Claim 4 (Currently Amended): The propylene homopolymer according to claim [[3]] 31, satisfying the following relationship:

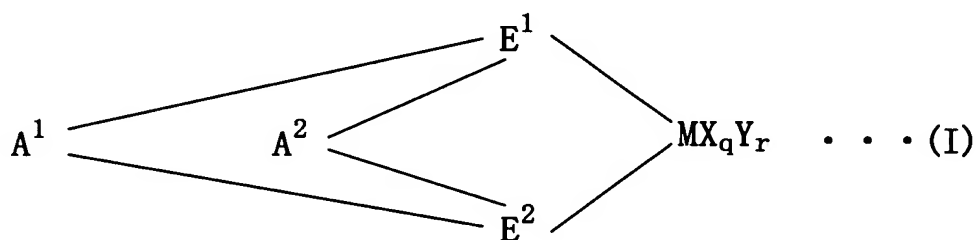
$$(mm) \times (rr)/(mr)^2 \leq 2.0$$

wherein (mm) is a meso triad fraction; (rr) is a racemic triad fraction; and (mr) is a triad fraction.

Claims 5-7 (Canceled):

Claim 8 (Currently Amended): The propylene homopolymer according to claim [[3]] 31 produced by polymerizing propylene in the presence of a polymerization catalyst containing:

(A) a transition metal compound represented by the general formula (I):



wherein M is a metal element of Groups 3 to 10 of the Period Table or lanthanoid series;

E<sup>1</sup> and E<sup>2</sup> are respectively a ligand selected from the group consisting of substituted cyclopentadienyl, indenyl, substituted indenyl, heterocyclopentadienyl,

substituted heterocyclopentadienyl, amide, phosphide, a hydrocarbon group and a silicon-containing group, which form a cross-linked structure via A<sup>1</sup> and A<sup>2</sup> and may be the same or different;

X is a ligand capable of forming a  $\sigma$ -bond or  $\pi$ -bond with the proviso that when a plurality of X groups are present, these groups may be the same or different, and may be cross-linked with the other X group, E<sup>1</sup>, E<sup>2</sup> or Y;

Y is a Lewis base with the proviso that when a plurality of Y groups are present, these groups may be same or different, and may be cross-linked with the other Y group, E<sup>1</sup>, E<sup>2</sup> or X;

A<sup>1</sup> and A<sup>2</sup> are divalent cross-linking groups capable of bonding the two ligands E<sup>1</sup> and E<sup>2</sup> to each other, are respectively a C<sub>1</sub>-C<sub>20</sub> hydrocarbon group, a C<sub>1</sub>-C<sub>20</sub> halogen-containing hydrocarbon group, a silicon-containing group, a germanium-containing group, a tin-containing group, -O-, -CO-, -S-, -SO<sub>2</sub>-, -Se-, -NR<sup>1</sup>-, -PR<sup>1</sup>-, -P(O)R<sup>1</sup>-, -BR<sup>1</sup>- or -AlR<sup>1</sup>- wherein R<sup>1</sup> is a hydrogen atom, a halogen atom, a C<sub>1</sub>-C<sub>20</sub> hydrocarbon group or a C<sub>1</sub>-C<sub>20</sub> halogen-containing hydrocarbon group, and may be the same or different;

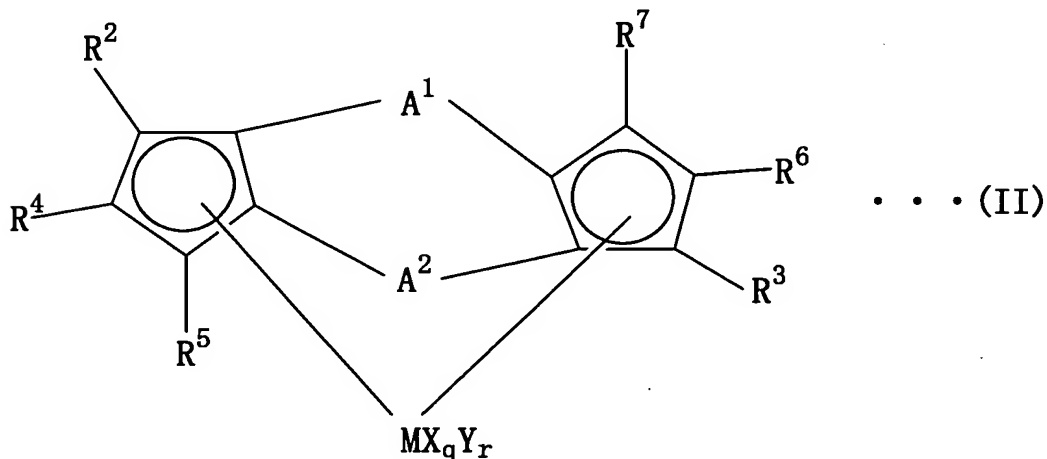
q is an integer of 1 to 5 given by the formula:

{(valence of M) - 2}; and

r is an integer of 0 to 3, and

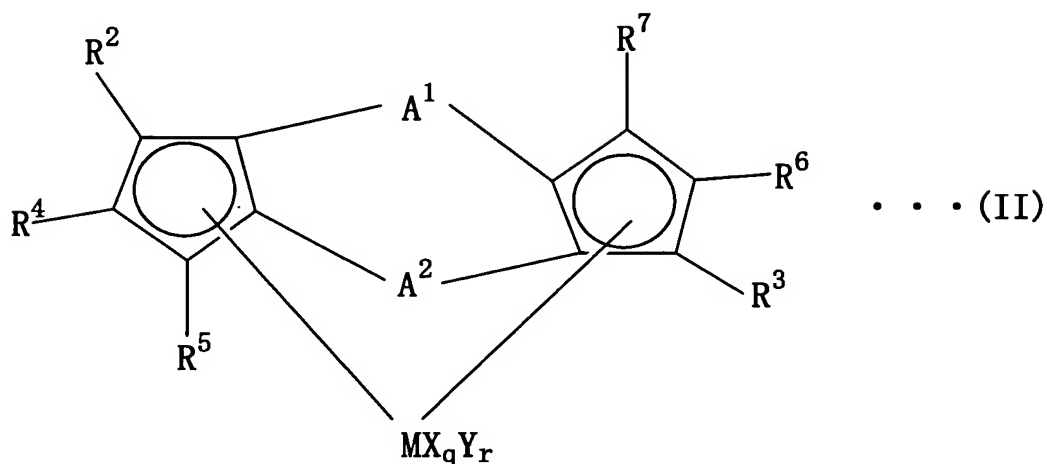
(B) a component selected from the group consisting of (B-1) a compound capable of forming an ionic complex by reacting with the transition metal compound (A) or a derivative thereof, (B-2) aluminoxane, and (B-3) a Lewis acid.

Claim 9 (Original): The propylene homopolymer according to claim 8, wherein the transition metal compound represented by the general formula (I) is a transition metal compound represented by the general formula (II):



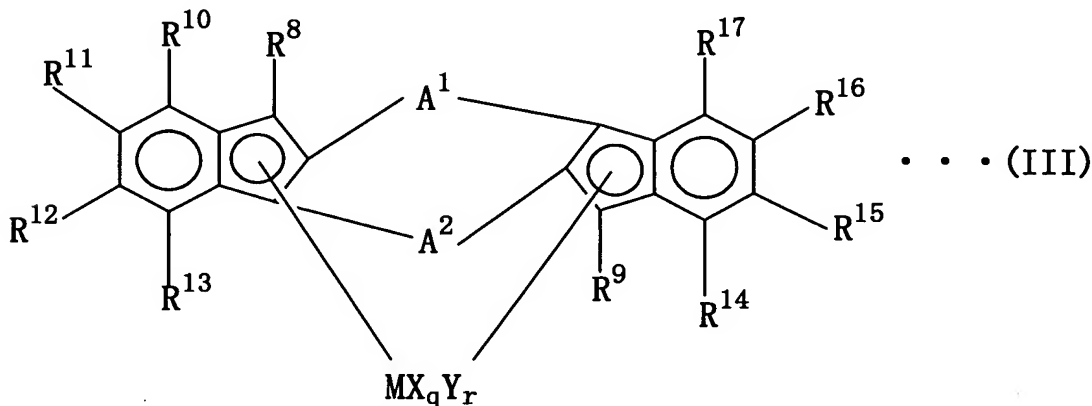
wherein, M, X, Y,  $\text{A}^1$ ,  $\text{A}^2$ , q and r are the same as defined in the above general formula (I);  $\text{R}^2$  through  $\text{R}^7$  are respectively a hydrogen atom, a halogen atom, a  $\text{C}_1$ - $\text{C}_{20}$  hydrocarbon group, a  $\text{C}_1$ - $\text{C}_{20}$  halogen-containing hydrocarbon group, a silicon-containing group or a heteroatom-containing group with the proviso that at least one of  $\text{R}^2$  through  $\text{R}^7$  is not a hydrogen atom; and  $\text{R}^2$  through  $\text{R}^7$  may be the same or different, and adjacent groups of  $\text{R}^2$  through  $\text{R}^7$  may be bonded to each other to form a ring.

Claim 10 (Original): The propylene homopolymer according to claim 8, wherein the transition metal compound represented by the general formula (I) is a transition metal compound represented by the general formula (II):



wherein, M, X, Y, A<sup>1</sup>, A<sup>2</sup>, q and r are the same as defined in the above general formula (I); R<sup>2</sup> through R<sup>7</sup> are respectively a hydrogen atom, a halogen atom, a C<sub>1</sub>-C<sub>20</sub> hydrocarbon group, a C<sub>1</sub>-C<sub>20</sub> halogen-containing hydrocarbon group, a silicon-containing group or a heteroatom-containing group with the proviso that at least one of R<sup>2</sup> through R<sup>7</sup> is a group containing a heteroatom such as oxygen, halogen or silicon; and R<sup>2</sup> through R<sup>7</sup> may be the same or different, and adjacent groups of R<sup>2</sup> through R<sup>7</sup> may be bonded to each other to form a ring.

Claim 11 (Original): The propylene homopolymer according to claim 9, wherein the transition metal compound represented by the general formula (II) is a transition metal compound represented by the general formula (III):



wherein, M, X, Y, A<sup>1</sup>, A<sup>2</sup>, q and r are the same as defined in the above general formula (I); at least one of R<sup>8</sup> and R<sup>9</sup> represents a group containing a heteroatom such as oxygen, halogen or silicon; and R<sup>10</sup> through R<sup>17</sup> are respectively a hydrogen atom, a C<sub>1</sub>-C<sub>20</sub> hydrocarbon group, or a group containing a heteroatom such as oxygen, halogen and silicon.

Claims 12-16 (Canceled):

Claim 17 (Currently Amended): A propylene resin composition comprising the propylene homopolymer according to claim [[3]] 31 and a nucleating agent.

Claims 18-20 (Canceled):

Claim 21 (Currently Amended): A molded product produced by molding the propylene homopolymer according to claim [[3]] 31.

Claim 22 (Original): A molded product produced by molding the propylene resin composition according to claim 17.

Claims 23-25 (Canceled):

Claim 26 (Currently Amended): A propylene resin modifier comprising the propylene homopolymer according to claim [[3]] 31.

Claims 27-30 (Canceled):

Claim 31 (Currently Amended): A propylene homopolymer ~~having~~ satisfying:

(1) a 25°C hexane soluble content (H25) of 0-80 wt%;

(2) neither a melting temperature (T<sub>m</sub>) nor a melting endotherm (ΔH)

measurable by differential scanning calorimetry (DSC);

(3) a mesopentad fraction (mmmm) of 30-60 mol%;

(4) a racemic pentad fraction (rrrr) satisfying the following relationship:

$\{rrrr/(1-mmmm)\} \leq 0.1$ ;

(5) a fraction (W25) eluted at a temperature up to 25°C by temperature  
programmed chromatography, of from 20-100 wt%;

(6) a pentad fraction (rmmr) of more than 2.5 mol%; and

(7) an intrinsic viscosity (η) of from 0.5-15.0 dl/g as measured at 135°C in  
tetralin.

**BASIS FOR THE AMENDMENT**

Claims 1, 3, 5, 6, 7, 12-15, 18, 23, 24, 27 and 28-30 have been canceled.

Limitations of Claims 3 and 5 have been included in Claim 31.

No new matter is believed to have been added by entry of this amendment.

Entry and favorable reconsideration are respectfully requested.

Upon entry of this amendment Claims 4, 8-11, 17, 21, 22, 26, and 31 will now be active in this application.